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10/651,058

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EXAMINER

CHAWAN, SHEELA C

ART UNIT

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2624

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/651,058	Applicant(s) SHIMADA ET AL.	
	Examiner Sheela C. Chawan	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Amendment***

1. Applicant's amendment filed on 5/9/07 has been entered and made of record.  
New claims 17- 19 are added.  
Claims 1-19 are pending in the application.

***Response to Argument***

2. Applicant's arguments, see page 7- 8 of the remarks, filed 5/9/07, with respect to claims 1- 16 have been fully considered and are persuasive. The rejection of claims 1- 16 has been withdrawn.

Applicant's arguments see page 7 - 8 of the remarks, filed 5/9/07, with respect to the rejection of claims 1-16 under 102 (b) rejection have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Lesnick et al., (US 4,760,606).

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 7, 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Yanagida et al., (US. 5,775,918).

Claims 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Yanagida et al., (US. 5,775,918), in view of Lesnick et al., (US 4,760,606).

As to claim 1, Yanagida discloses a slip-processing device that processes a slip with a plurality of answer columns (fig 17, element 74, corresponds to plurality of answer columns, also note, fig 19 element 84) to be checked with one or more marks, comprising:

a slip recognition unit detecting the marks checked in any of the answer columns, on a basis of the image data of the slip (note, a slip processing device is used to process information on a paper (slip) such as a question paper, a small document (bank documents etc., to identify selected answers and recognize correct answers, correct an incorrect answer, composite the answers and produce an output, column 2, lines 50-67).

an answer column position (fig 18, position data) definition unit storing position definition information identifying locations of the answer columns (note, while making an examination paper by using the question are registered and stored in data base at the same time, (column 16, lines 35- 51);

an image accentuation unit accentuating pixels located in a vicinity of each of the marks checked in any of the answer columns (fig 14, column 13, lines 12- 35, 63- 67, column 14, lines 1- 40) in the image data by giving those pixels a color according (note, video processor 51 transforms the red, green and blue image signals from the color image sensor 106 to digital signals, then the processor 51 executes black offset correction shading correction and pixel position correction is executed in order to

correct deviation between pixels in the vertical direction (column 13, lines 63-67, column 14, lines 1-20), to the detected result and the position definition information (column 19, lines 61-67, column 20, lines 1-16, column 25, lines 55- 61); and

an output control unit outputting the image data accentuated by the image accentuation unit on a display device to prompt an operator to examine the accentuated image data (fig 15 A, column 17, lines 15 - 39).

As to claim 4, Yanagida discloses the slip processing device according to claim 2, wherein the pixels located in the vicinity of the answer column are pixels located within the frame of the answer column (fig 13, element 53, column 13, lines 36-44).

As to claim 7, Yanagida discloses the slip processing device according to claim 2, wherein the pixels located in the vicinity of the answer column are located outside the frame of the answer column and are located less than a specific number of pixels away from the frame (note, image sensor correcting the pixel position based on deviations and vertical direction, column 14, lines 15-20).

As to claim 14, see the rejection of claim 1 above.

As to claim 15, see the rejection of claim 1 above.

As to claim 16, see the rejection of claim 1, above.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 3, 5-6, 8-9 11,17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Yanagida et al., (US. 5,775,918) as applied to claims 1, 4,7,14 – 16 above and further in view of Lesnick et al., (US 4,760,606).

Regarding claim 2, Yanagida discloses a system for making examination papers and having an automatic marking function. Yanagida is silent about modifying the values of pixels in answer column.

Lesnick discloses a method and apparatus for increasing automation and document classifying ability of such system. The system comprises of: the slip processing device according to claim 1, wherein said image accentuation unit (note, accentuation unit corresponds to highlight mark, column 1, lines 19- 30) is a pixel value modification unit modifying the values of pixels located in the vicinity of the answer column. (Column 8, lines 31- 60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yanagida to include modification unit modifying the

values of pixels in answer column. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Yanagida by the teaching of Lesnick in order to identifying memory locations of the input document by recognition of highlighted data, (as suggested by Lesnick at column 1, line 49- 54).

As to claims 3, 5 - 6, 8 - 9, 11 Lesnick discloses the slip processing device according to claim 2, wherein said pixel value modification unit modifies the pixel values to values other than the values of the pixels composing the mark (column 1, lines 19- 30, column 8, lines 31- 60).

As to claim 17, Lesnick discloses a method for processing a multiple choice answer sheet having answers indicated by marks, comprising:

detecting a mark among a plurality of answer spaces (column 1, lines 19- 30) ;  
and

highlighting the mark in an image of the answer sheet (column 8, lines 31- 60).

As to claims 18-19, Lesnick discloses the method for processing a multiple choice answer sheet according to claim 17, wherein said highlighting highlights pixels in a color different from a color of the mark (column 8, lines 31- 60).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagida et al., (US. 5,775,918), as applied to the claims 1-9,11,14-19 above and further in view of Matsuno et al., (US.6,320,983 B1).

Regarding claim 10, Yanagida discloses system for making examination papers and having an automatic marking function. Yanagida is silent about a pointing device.

Matsuno discloses method and apparatus for character recognition applied to a slip processor. The system comprises of:

A pointing device (note, electronic computer 1002 as a control unit for controlling the image data reader 1001 comprises an input section 1002-1 such as a keyboard or a mouse for inputting data or the like (only a keyboard is shown in FIG. 15), a main unit Have the electronic computer 1002-2 and a display 1002-3 for displaying thereon data or control information or the like) wherein the designation of pixels is made by selecting the image data outputted on the display device using the pointing device (fig 2, element 300, column 1, 52-60)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yanagida to include a pointing device. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Yanagida by the teaching of Matsuno in which the cost of image reading mechanism as well as of the slip- forms can be reduced, (as suggested by of Matsuno at column 7, lines 7- 10).



As to claim 12, Matsuno discloses the slip processing device according to claim 11, wherein said output control unit scrolls the detected result information outputted on the display device in synchronization with the image data outputted on the display device (fig 1, element 10 and 30, column 11, lines 33-39).

As to claim 13, Matsuno discloses the slip processing device according to claim 11, wherein said output control unit outputs the detected result information on the display device for each question contained on the slip, if the image data outputted on the display device is scrolled, said output control unit detects the question displayed in a prescribed position of the display device, and said output control unit outputs the detected result information corresponding to the detected question on the display device. (column 11, lines 55-67).

***Other prior art cited***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Loiacono (US. 6,175,841 B1) discloses computerized systems for producing on-line instructional materials.


**Contact Information**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela C Chawan whose telephone number is. 571-272-7446. The examiner can normally be reached on Monday - Thursday 7.30 - 6.00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Group Art Unit 2624  
August 4, 2007

  
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PRIMARY EXAMINER